

# CHROMOSOME NUMBER OF *LYSIMACHIA CILIATA* L.

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Cytological investigations are important to clarify the nature and extent of the internal chromosomal diversity in the species of *Lysimachia*.

*Lysimachia ciliata* (Primulaceae) is commonly found in open swamps, marshes, stream banks and ranges from Newfoundland to British Columbia. The material in the vegetative stage from Quetico Park was received from Dr. N. K. McEwen under the name of *Prunella vulgaris*. Chromosome number of  $2n = 96$  (Fig. 1) was determined from root tips by pretreating the roots with paradichlorobenzene for three hours, hydrolyzing them in N.HCl for about ten minutes at  $60^{\circ}\text{C}$ ., and subsequently squashing them in 2% acetocar-



Fig. 1. Chromosomes in root tip cell of *Lysimachia ciliata* L.  $2n = 96$ .

mine. For meiotic investigations, material from Alterive lake, Galt, Ontario (CAN L. S. GILL 296) was fixed in acetic alcohol and chromosome counts were made by the acetocarmine squash method. The meiotic divisions in the PMC's were regular and 48 bivalents were observed at M-I in temporary preparation.

The present counts of  $2n = 96$  do not agree with the previous count of  $2n = 72$  (Smith 1964c). Base numbers are 9, 12 and 14 (Darlington & Wylie 1955) and *L. ciliata* is octaploid with  $x = 12$ . However, the reports of  $2n = 16$  in *L. nemorum* and  $2n = 32$  in *L. nummularia* (Gadella & Kliphuis 1963),  $2n = 30$  in *L. punctata* (Reese, 1953 and Taylor and Mulligan, 1968),  $2n = 20$  in *L. japonica* (Borgman, 1964) and in *L. mauritiana* (Chuang, *et al.*, 1963), are indicative of new base numbers of 8, 10 and 15, for this genus. Thus the genus *Lysimachia* shows heteroploidy and its basic chromosome numbers are 8, 9, 10, 12, 14 and 15. About 55.17% of the species of this genus investigated to date are polyploids.

#### LITERATURE CITED

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